

Report Date: 21 Nov 2014

**Summary Report for Individual Task
091-94R-1602**

**Repair Laser Detecting Test Set TS-4321/AVR-2 (*)
Status: Approved**

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD6 - This product/publication has been reviewed by the product developers in coordination with the FT.LEE/CASCOM foreign disclosure authority. This product is releasable to students from foreign countries on a case-by-case basis.

Condition: You are in an Operational Environment (OE), with a non-mission capable Laser Detecting Test Set TS-4321/AVR-2(*) that has been submitted to your Shop along with DA Form 2407, Maintenance Request and DA Form 2404, Equipment Inspection and Maintenance Worksheet. Your supervisor has assigned the work order to you for repair. At your workstation you have the following items: Electronic Equipment Tool Kit TK-105/G; Oscilloscope AN/USM-488; Digital Multimeter, AN/PSM-45A; torque wrench, 1/4-inch drive, 0-25 inchpounds; torque wrench, 1/4-inch drive, 0-32 inch-pounds; torque wrench, 8.0 +/- 0.3 inchpounds; TM 11-6625-3233-13-1 and TM 11-6625-3233-23P; DA Form 2404; DA Form 2407; and DA Pam 738-751, Functional Users Manual for the Army Maintenance Management System Aviation. NOTE: Substitutions for equipment may be made per test equipment modernization (TEMOD) publications. Some iterations of this task should be performed in MOPP 4.

Standard: Restore the Laser Detecting Test Set, TS-4321/AVR-2 (*) to fully mission capable condition using TM 11-6625-3233-13-1 and TM 11-6625-3233-23P. Use DA Pam 738-751 to complete all DA Form 2407 and records, without error and ensure all safety precautions are observed.

Special Condition: None

Safety Risk: Low

MOPP 4: Sometimes

Task Statements

Cue: Your supervisor has directed you to troubleshoot and repair the Laser Detecting Test Set TS-4321/AVR-2(*) using TM 11-6625-3233-13-1 and TM 11-6625-3233-23P.

DANGER

None

WARNING

THE TS-4321/AVR-2 LASER DETECTING TEST SET WEIGHS APPROXIMATELY FORTY-FIVE POUNDS, THUS REQUIRES TWO-PERSON LIFT TO AVOID POSSIBLE PERSONNEL INJURY.

THE SM-815 LASER SIMULATOR CONTAINS CLASS III B LASER DIODES, SO ALWAYS POSITION THE SM-815 LASER SIMULATOR SO THAT THE WINDOWS ARE DIRECTED AWAY FROM PERSONNEL AND THERE IS NO POSSIBILITY OF THE BEAM BEING VIEWED.

ISOPROPYL ALCOHOL IS TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. SKIN AND EYE PROTECTION IS REQUIRED. AVOID PROLONGED CONTACT. GOOD GENERAL VENTILATION IS NORMALLY ADEQUATE.

DE-ENERGIZE THE SM-815 LASER SIMULATOR IMMEDIATELY WHEN IT IS NOT IN USE.

CAUTION

DO NOT PRESS ON THE WINDOW WHEN YOU ARE HANDLING THE SM-815 LASER SIMULATOR. THE GLASS IS FRAGILE AND COULD SCRATCH, CRACK, OR BREAK.

USE CARE IN INSTALLING OR REMOVING THE EQUIPMENT FROM THE COMBINATION CASE TO PREVENT DAMAGE.

THE CIRCUIT CARD ASSEMBLIES WITHIN THE TS-4321 /AVR-2 LASER DETECTING TEST SET CONTAIN COMPONENTS SENSITIVE TO DAMAGE BY ELECTROSTATIC DISCHARGE. USE ELECTROSTATIC DISCHARGE PRECAUTIONARY PROCEDURES WHEN TOUCHING, REMOVING. OR INSERTING THE CIRCUIT CARD ASSEMBLIES.

Remarks: None

Notes: None

Performance Steps

1. Obtain required tools, test equipment and references using TM 11-6625-3233-13-1.
2. Complete appropriate blocks on DA Form 2407 using DA Pam 738-751.
3. Perform visual inspection.
4. Set up test equipment using TM 11-6625-3233-13-1.
5. Verify faults listed on DA Form 2407 using the appropriate troubleshooting chart in TM 11-6625-32-22-13-1.
6. Troubleshoot the TS-4321/AVR-2(*) using the troubleshooting chart in TM 11-6625-3222-13-1.
7. Identify the defective component (s) using TM 11-6625-3233-13-1 and TM 11-6625-3233-23P.
8. Replace defective component (s) with operational ones using TM 11-6625-3233-13-1 and TM 11-6625-3233-23P.
9. Perform operational checks using TM 11-6625-3233-13-1.
10. Complete appropriate blocks on DA Form 2407, using DA Pam 738-751.
11. Tag defective component (s) for turn-in using DA Pam 738-751.
12. Notify supervisor upon completion of task.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show the Soldier what was done wrong and how to do it correctly.

Evaluation Preparation: Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Obtained required tools, test equipment and references using TM 11-6625-3233-13-1.			
2. Completed appropriate blocks on DA Form 2407 per DA Pam 738-751.			
3. Performed visual inspection.			
4. Properly set up test equipment using TM 11-6625-3233-13-1.			
5. Verified faults listed on maintenance request form using the appropriate troubleshooting chart in TM 11-6625-3233-13-1.			
6. Performed troubleshooting on the TS-4321/AVR-2(*) using the troubleshooting chart in TM 11-6625-3233-13-1.			
7. Identified the defective component (s) using TM 11-6625-3233-13-1 and TM 6625-3233-23P.			
8. Replaced defective component (s) with operational ones using TM 11-6625-3233-13-1 and TM 11-6625-3233-23P.			
9. Performed operational checks using TM 11-6625-3233-13-1.			
10. Completed appropriate blocks on DA Form 2407, using DA Pam 738-751.			
11. Tagged defective component (s) for turn-in using DA Pam 738-751.			
12. Notified supervisor upon completion of task.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	DA FORM 2404	EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET	Yes	No
	DA FORM 2407	MAINTENANCE REQUEST	Yes	No
	PAM 738-751	FUNCTIONAL USER'S MANUAL FOR THE ARMY MAINTENANCE MANAGEMENT SYSTEM-AVIATION (TAMMS-A) http://www.apd.army.mil/pdffiles/p738_751.pdf	No	No
	TM 11-6625-3233-13-1	OPERATORS, AVIATION UNIT MAINTENANCE, AND AVIATION INTERMEDIATE MAINTENANCE MANUAL FOR LASER DETECTING TEST SET TS-4321/AVR-2 (NSN 4931-01-280-9754) (EIC: N/A) {NAVAIR 16-35TS4321-1}CLUD	Yes	No
	TM 11-6625-3233-23P	AVIATION UNIT AND AVIATION INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR LASER DETECTING TEST SET TS-4321/AVR-2 (NSN 4931-01-280-9754) (EIC: N/A) {NAVAIR 16-35TS4321-2}	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. In an operational environment, it is the responsibility of the Soldier and DA Civilians to protect the environment from damage.

All operations must conform to the Army Environmental Program, TC 3-34.489 (The Soldier and the Environment), FM 3-100.4 (Environmental Consideration in Military Operations), and local, state, and federal environmental policies, the Clean Air Act (CAA), CAA amendments, National Ambient Air-Quality Standards (NAAQS), as well as Occupational Safety and Health Administration (OSHA), Hazard Communication Standard for Industry, 29 CFR, part 1910.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Incidental to Army operations and activities, all operations must provide for public safety, safe and healthful work places, procedures, and equipment. Observe all safety precautions when using lifting devices and handling heavy parts. Observe all safety and/or environmental precautions regarding electricity, radiation, radio frequency (RF), fuel, lubricants, high pressures, and refrigerants. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required in accordance with AR 385-10, (The Army Safety Program) the Clean Air Act (CAA), CAA amendments, National Ambient Air-Quality Standards (NAAQS), and the Occupational Safety and Health Administration (OSHA) Hazard Communication standard.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks : None